

Figure 1

A. Rig open reading frame nucleotide sequence

atgccggaacagagtaacgattaccgcgtggtggtgttcggggcggcggtgggcaag
agctcgtggtgctgcgttcgtgaagggaacgttcgcgcgacacctacatccccaccatc
gaggacacctaccggcaggtgatcagctgcgacaaagagcgtGtgacgcgtgcagatcaca
gacaccacggcagccaccagtccccggccatgcagcgcctgtccatctccaaggccac
gccttcacctcgtgttctccgtcaccagcaagcagtcgctggaggagctggggcccatc
tacaagctcatcgtgcagatcaagggcagcgtggaggacatccccgtgatgctcgtgggc
aacaagtgcgatgagacgcagcgggaggtggacacgcgcgagggcaggggtggccag
gagtggagtgcgcttcatggagacctcggccaaagatgaactaacgtcaaggagctc
ttccaggagctgctgacgctggagacgcgcgggaacatgagcctcaacatcgacggcaag
cgctccgggaagcagaagagagacagaccgcgtcaagggcaaatgcaccctcatgtga

B. Rig amino acid sequence

MPEQSNDYR VVVFAGGVGKSSL VLR FVKGTFRD TYPTIED TYRQVISCD
KSVCTLQITD TTGSHQFP AMQRLSISKGHAFIL VFSVTSKQSLEEL GPIYKLIV
QIKGSVEDIP VMLVGNKCDETQREVD TREAQAVAQEWKCAF METSAKMN
YNVKELFQELL TLETRRNMSL NIDGKRS GKQKR TDRVKGKCTLM

Figure 2

Rig	mpegsndyrvvvf-----	13
Noey2	mgnasfgskeqkllkrllrpallilrafkphrkirdyrvvvv-	43
RalA	maankpkgqnsalalhkvimv-----	20
Rap1A	mreyklvvl-----	9
Rap2A	mreykvvv-----	9
HRas	mteyklvv-----	9
RRas	mssgaasgtgrgrprggpgpgdpppsethklvv-----	35
Rheb	mpqsksrkiaill-----	12
Rig	GAGGVGKSSlvlrfrvkgtrfrdtYIPTIEDTYrqviscdksvctl	57
Noey2	GTAGVGKSTllhkwasgnfrheYLPITYcqllgcshgvlsl	87
RalA	GSGGVGKSAltqlqfmydefvedYEPTKADSYrkvvldgeevqi	64
Rap1A	GSGGVGKSAltqvqfvqgfvfiekYDPTIEDSYrkvevdcqgcml	53
Rap2A	GSGGVGKSAltqvqfvqgfvfiekYDPTIEDFYrkeievdspsvl	53
HRas	GAGGVGKSAltqqlqnhfvdeYDPTIEDSYrkqvvidgetcll	53
RRas	GSGGVGKSAltqifiqsyfvsdYDPTIEDSYtkicsvdgiparl	79
Rheb	GYRSVGKSSltiqfveqgvfvsYDPTIENTFtklitvngqeyhl	56
Rig	qitDTTGS HQfpamqrlsiskghafilvsvtskqsleelgpiy	101
Noey2	hitDSKSGDGNralqrhviarghafvlvsvtkketleelkafy	131
RalA	dilDTAGQEDyaaairdnyfrsgegflcvfsitemesfaatadfr	108
Rap1A	eildTAGTEQftamrdlymkngggfalvysitaqstfndlqdlr	97
Rap2A	eildTAGTEQfasmrldlyikngggfilvyslvgqsfqdikpmr	97
HRas	dilDTAGQEEysamrdqymrtggegflcvfainntksfedihqyr	97
RRas	dilDTAGQEEfgamreqymraghgflvfaindrqsfnvvgklf	123
Rheb	qlvDTAGQDEysifpqtysidingyilvsvtsiksfevikvih	100
Rig	klivqikgsvedipvmlvg-----NKCDetqrevdtreaqav	138
Noey2	elickikgnnlhkfpivlv-----NKSDdthrevalndgatc	169
RalA	eqilrvkedenvpfillvg-----NKSDledkrqvsveeakn	144
Rap1A	eqilrvkdtedvpmlvg-----NKCDledervvgkeggqn	133
Rap2A	dqiirvkryekvpvmlvg-----NKVDleserevsssegra	133
HRas	eqikrvkdsddvpmlvg-----NKCDlaartvesrqaqdl	133
RRas	tqilrvkdrddfpvmlvg-----NKADlesqrqvprseasa	159
Rheb	gklldmvgkvqipimlv-----NKKDLhmervisyeegka	136
Rig	aqewkcaf-----ETSAkmnynvkelfqelltletrrnmslnidg	179
Noey2	amewncaf-----EISAKtdvngelfhmllynkktptglqepe	210
RalA	raeqwnvnyv-----ETSAktranvdkvffdlmreirarkmedskek	186
Rap1A	larqwcncaf-----ESSAkskinvneifydlvrqinrktpvekkkp	176
Rap2A	laeewgcpf-----ETSAksktmvdelfaeivrqmnyaaqpdkddp	175
HRas	arsygiypi-----ETSAktrqgvedafytlvreirghklrklpp	174
RRas	fgashhvayf-----EASAKlrlnvdeafeqlvravrkyqegelpsp	201
Rheb	laeswnaaf-----ESSAkenqtavdvfrriileakmdgaasgqk	178
Rig	krsgkqrtdrvkgk-----//-----CTLM	198
Noey2	kksqmpntteklldk-----//-----CIIM	229
RalA	ngkkkrkslakrirer-----//-----CCIL	206
Rap1A	kkks-----//-----CLLL	184
Rap2A	ccsa-----//-----CNIQ	183
HRas	desgpgcmsck-----//-----CVLS	189
RRas	ppsaprkkgggcp-----//-----CVLL	218
Rheb	ss-----//-----CSVM	184

Figure 3

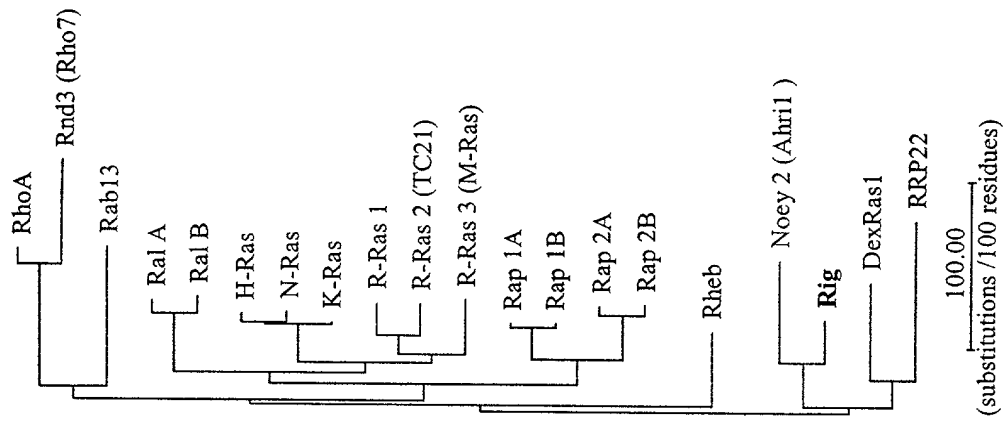


Figure 5

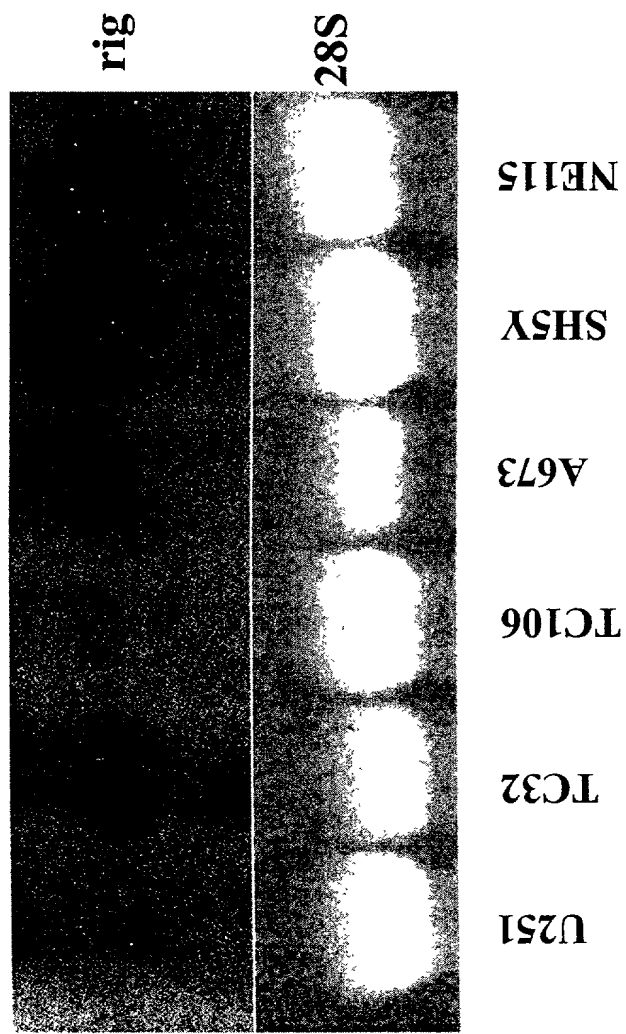


Figure 6

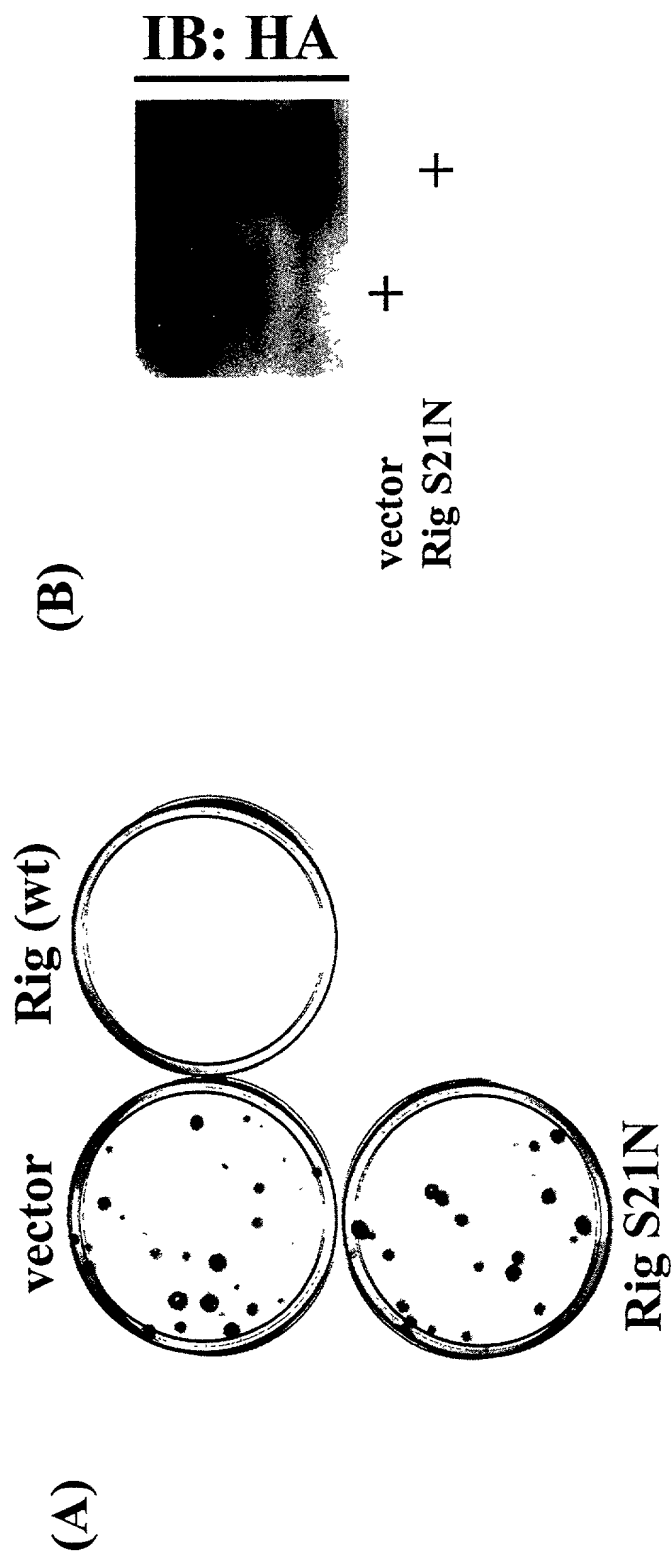


Figure 7

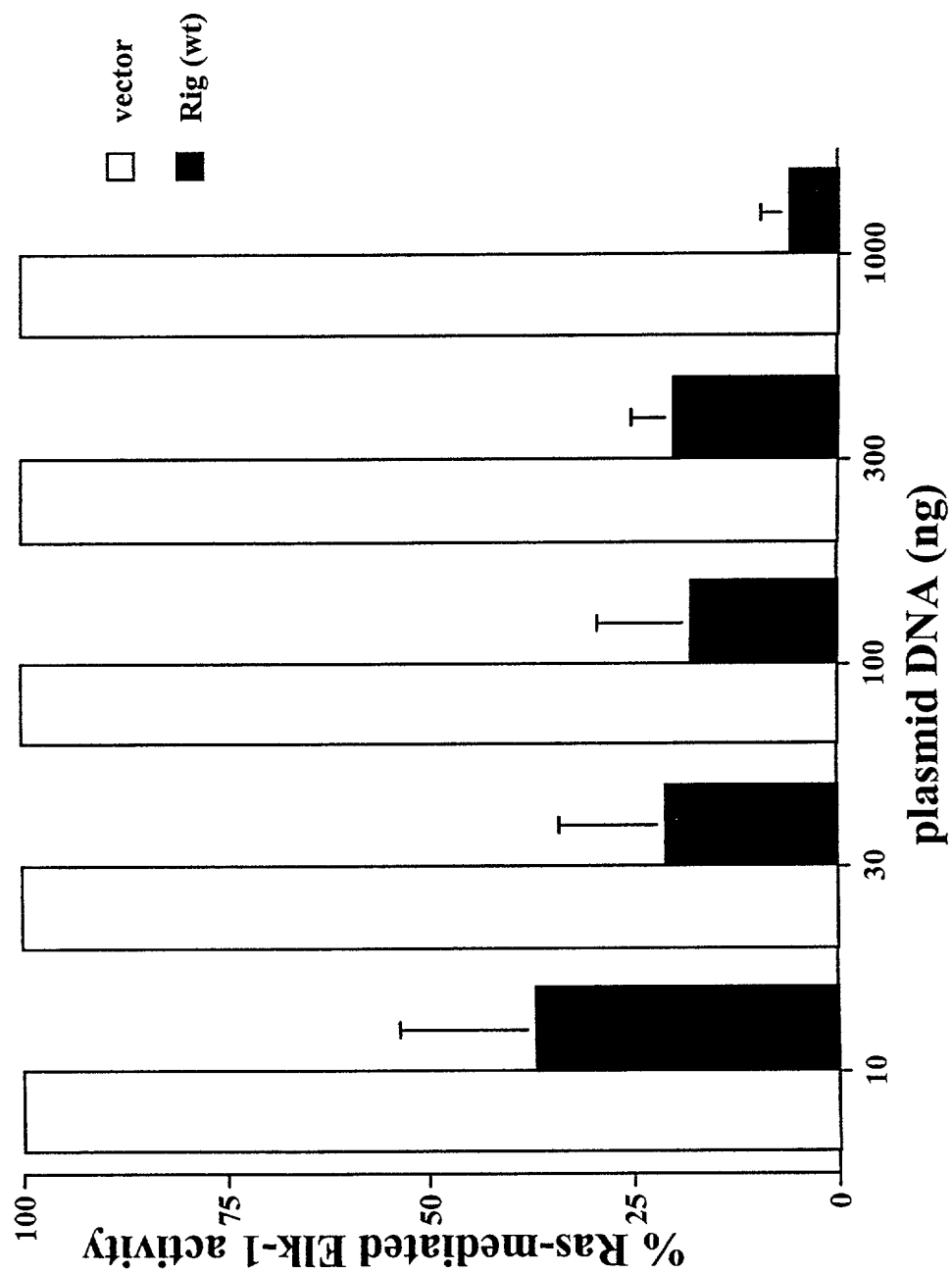


Figure 8

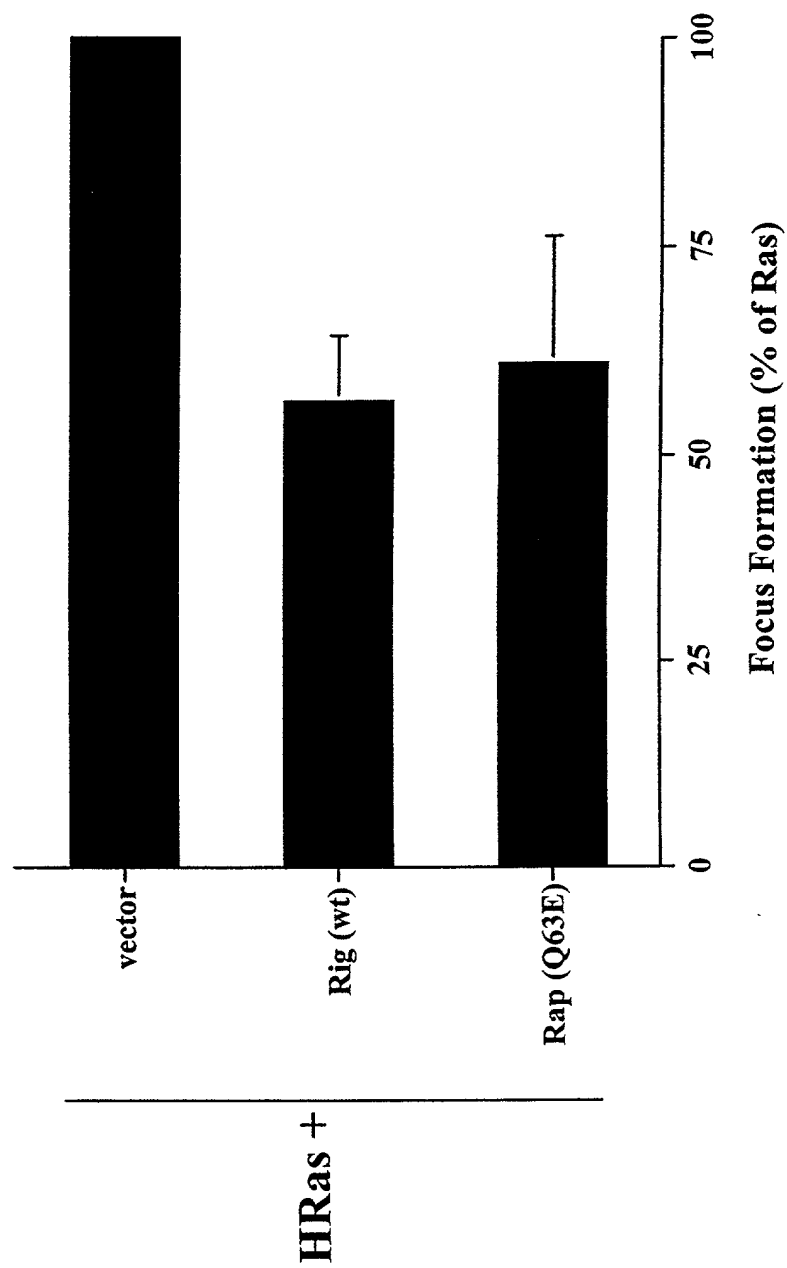


Figure 9

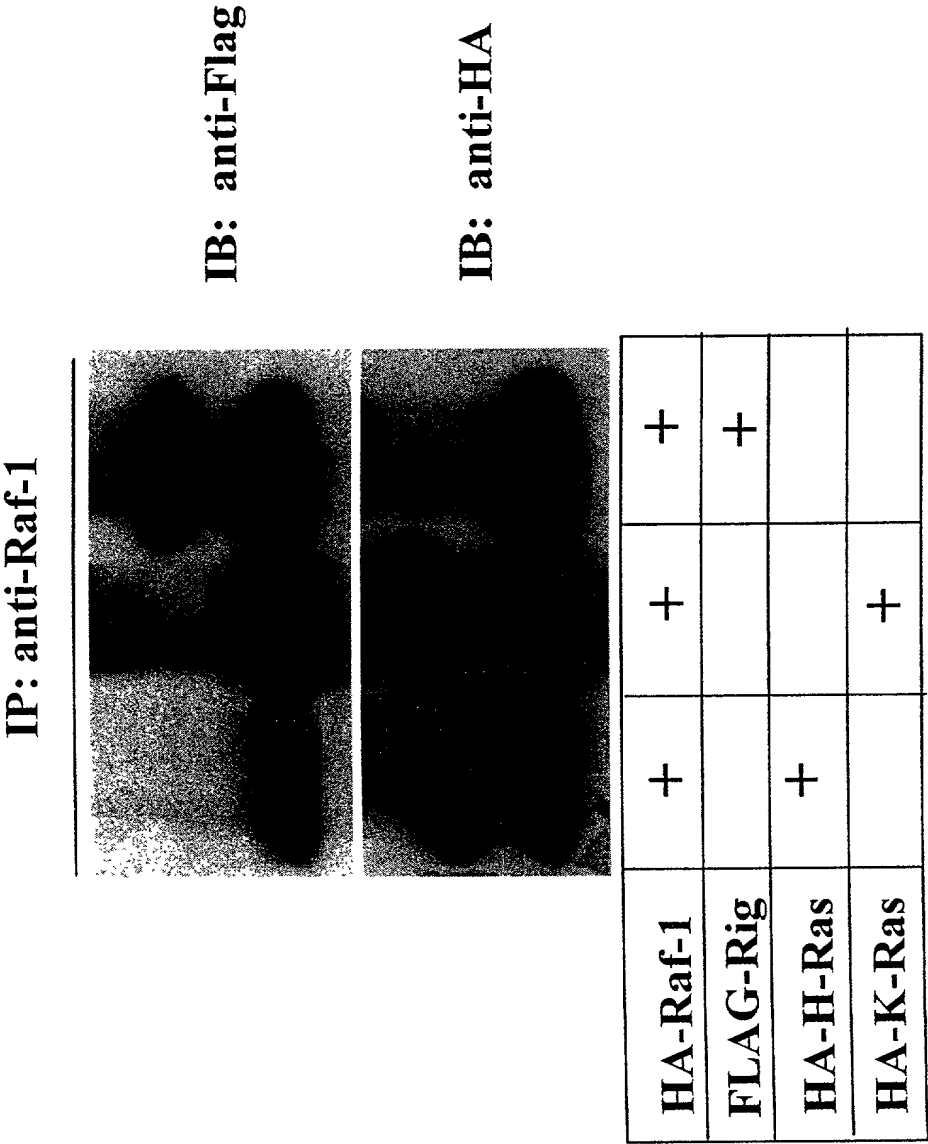


Figure 10

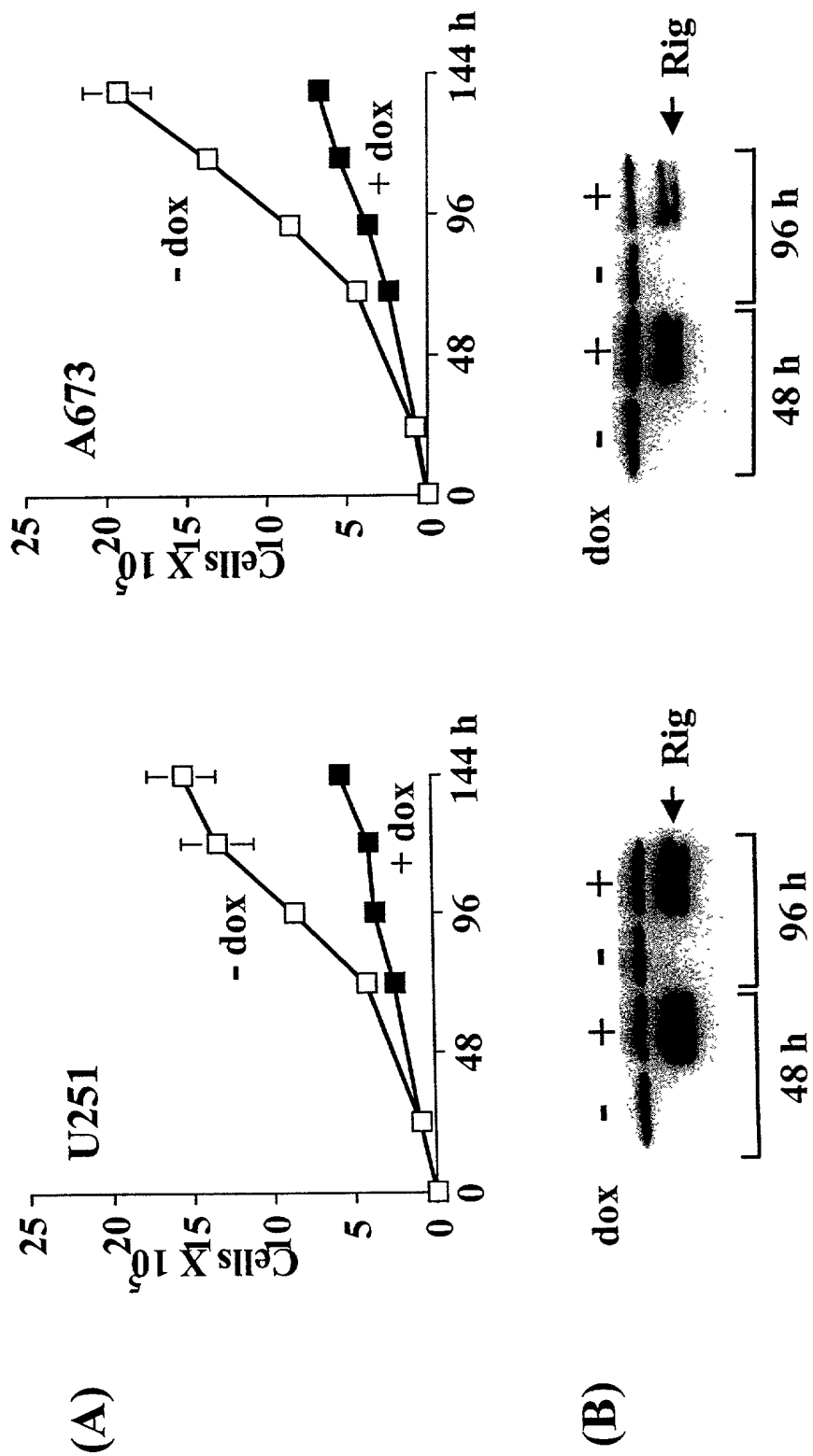


Figure 11

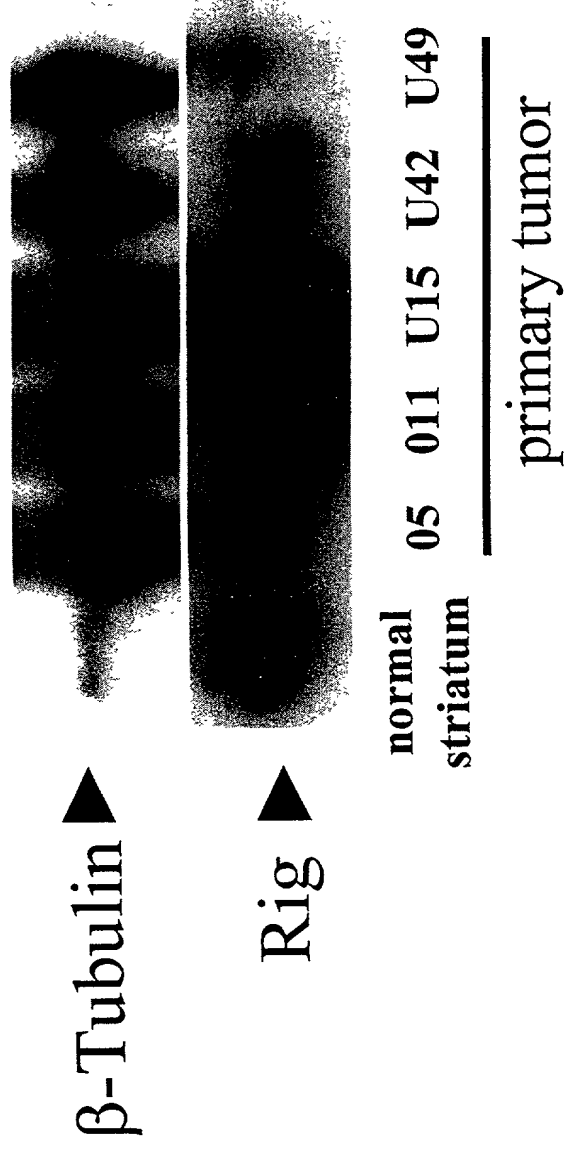


Figure 12

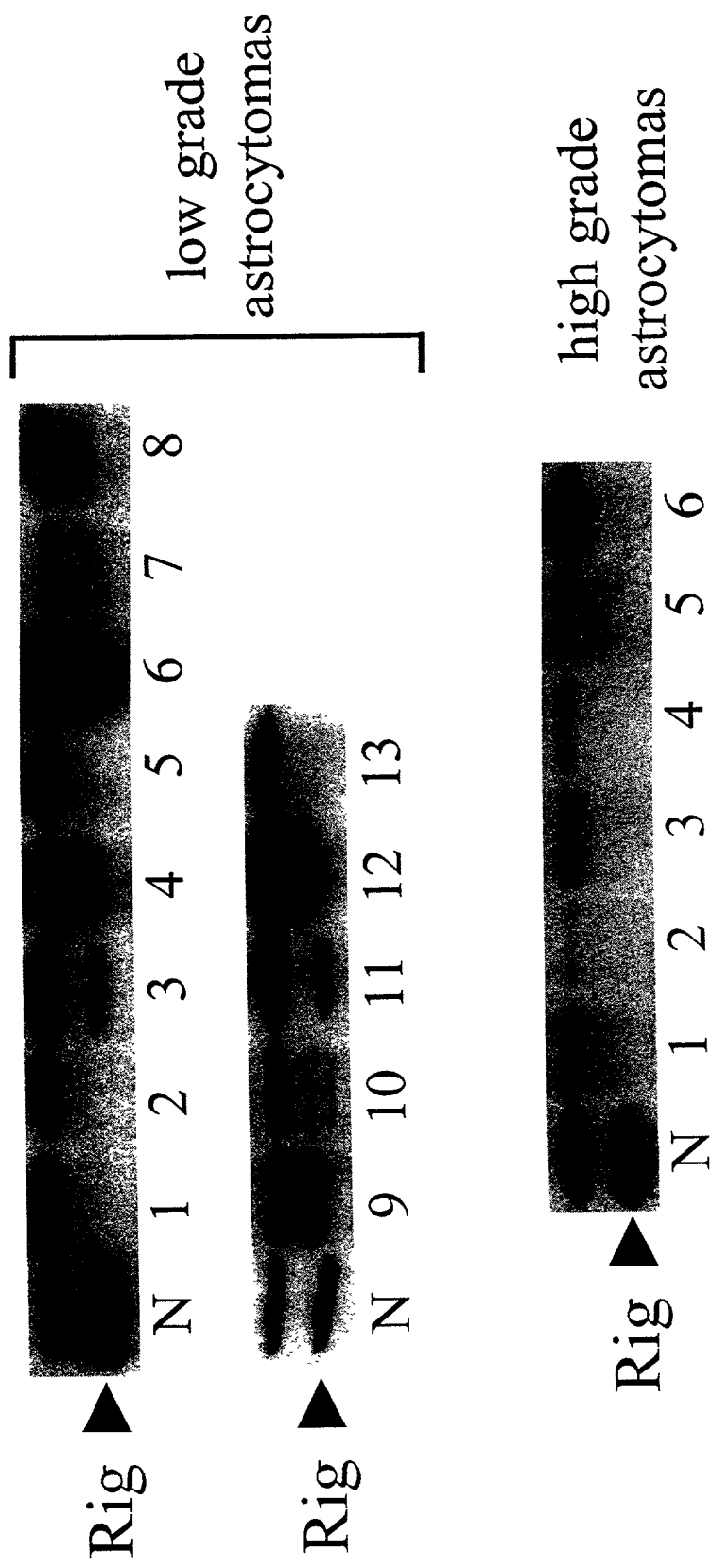


Figure 13

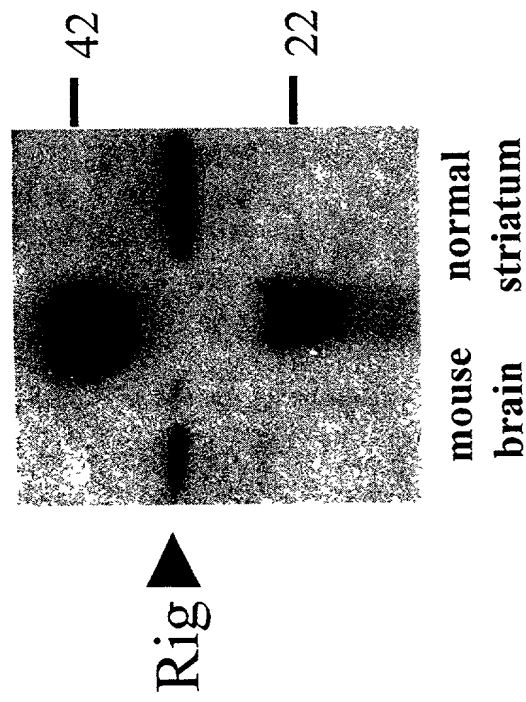


Figure 14

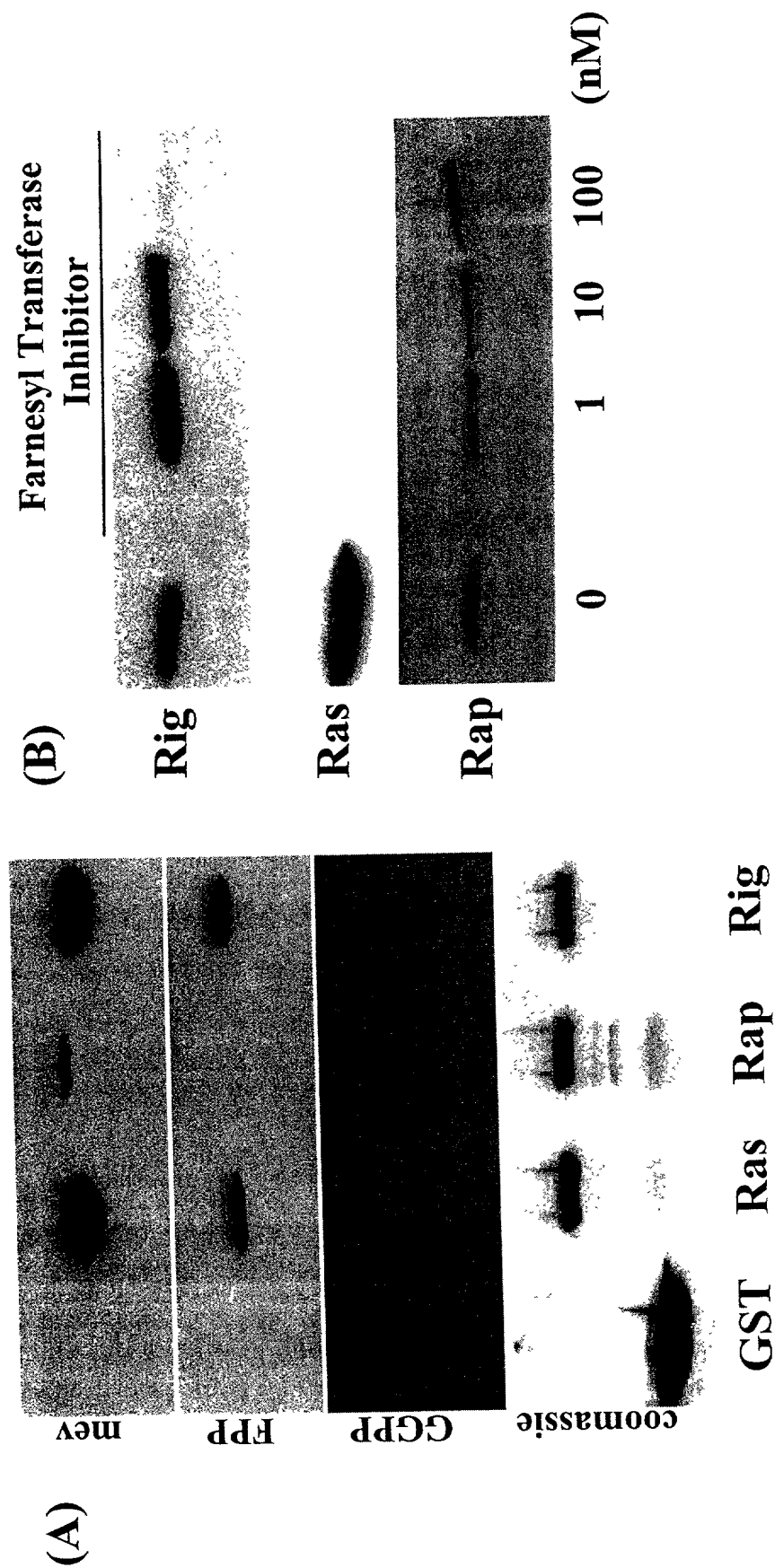


Figure 15

